

What is claimed is:

1. A method for targeted gene repair, comprising  
contacting a non-repaired target RNA with an RNA oligonucleotide complex  
comprising a first oligonucleotide and a second oligonucleotide, said first oligonucleotide  
comprising a sequence complementary to a repaired target RNA, wherein the RNA sequence  
of the first oligonucleotide comprises an RNase H-resistant modification, and said second  
oligonucleotide comprises an RNA sequence complementary to at least 6 nucleotides of the  
first oligonucleotide at the site in the sequence of the first oligonucleotide which is not  
complementary to the non-repaired target RNA; and  
hybridizing said complex to said non-repaired target RNA in the presence of an  
RNase, wherein a repaired RNA is produced.
2. The method of claim 1, wherein the repaired target RNA comprises a wild-type  
sequence.
3. The method of claim 2, wherein the non-repaired target RNA comprises a mutation  
compared to said wild type sequence.
4. The method of claim 3, wherein said mutation is a substitution, deletion or insertion  
of at least one base pair compared to said wild type sequence.
5. The method of claim 1, further comprising, preceding the steps of claim 1, contacting  
the non-repaired target RNA with a phosphorothioate (PS) containing sequence comprising a  
deoxynucleotide with RNase H resistant flanking ends.
6. The method of claim 1, wherein said RNase H-resistant modification is the addition of  
a 2-O-methyl moiety.
7. The method of claim 1, wherein said first oligonucleotide is at least 10 nucleotides in  
length.

8. The method of claim 7, wherein said first oligonucleotide comprises about 33 nucleotides.
9. The method of claim 1, wherein said second oligonucleotide comprises at least 7 nucleotides.
10. The method of claim 9, wherein said second oligonucleotide comprises about 11 nucleotides.
11. The method of claim 1, wherein said first oligonucleotide and said second oligonucleotide are annealed.
12. The method of claim 1, wherein contacting said target RNA occurs within a cell.
13. The method of claim 12, wherein said cell is *in vitro*, *ex vivo* or *in vivo*.
14. The method of claim 12, wherein said cell is a human cell.
15. A method for treating or ameliorating a symptom of cystic fibrosis in a subject in need thereof, comprising  
administering an RNA oligonucleotide complex directed to a non-repaired target RNA, said complex comprising a first oligonucleotide and a second oligonucleotide, said first oligonucleotide comprising a sequence complementary to a repaired target RNA, wherein the RNA sequence of the first oligonucleotide comprises an RNase H-resistant modification, and said second oligonucleotide comprises an RNA sequence complementary to at least 6 nucleotides of the first oligonucleotide at the site on the sequence of the first oligonucleotide which is not complementary to the non-repaired target RNA; and  
wherein administration produces a repaired targeted RNA, thereby treating or ameliorating symptom of cystic fibrosis.
16. The method of claim 15, wherein the repaired target RNA comprises a wild-type sequence.

17. The method of claim 16, wherein the non-repaired target RNA comprises a mutation compared to said wild type sequence.
18. The method of claim 17, wherein said mutation is a substitution, deletion or insertion of at least one base pair compared to said wild type sequence.
19. The method of claim 15, further comprising, preceding the steps of claim 15, administering a phosphorothioate (PS) containing sequence comprising a deoxynucleotide with RNase H resistant flanking ends.
20. The method of claim 15, wherein said RNase H-resistant modification is the addition of a 2-O-methyl moiety.
21. The method of claim 15, wherein said first oligonucleotide is at least 10 nucleotides in length.
22. The method of claim 21, wherein said first oligonucleotide comprises about 33 nucleotides.
23. The method of claim 15, wherein said second oligonucleotide comprises at least 7 nucleotides.
24. The method of claim 23, wherein said second oligonucleotide comprises about 11 nucleotides.
25. The method of claim 15, wherein said first oligonucleotide and said second oligonucleotide are annealed.
26. An RNA oligonucleotide complex for modulating the expression or activity of a cystic fibrosis transmembrane conductance regulator (CFTR) gene product, the complex comprising a first oligonucleotide and a second oligonucleotide, said first oligonucleotide comprising the nucleic acid sequence of SEQ ID NO:1 and said second oligonucleotide comprising the nucleic acid sequence of SEQ ID NO:2, wherein said first and second oligonucleotide are annealed.

27. A method for targeted gene repair, comprising  
contacting a target RNA of a cell with a hybrid DNA/RNA oligonucleotide complex, said complex comprising a first strand and a second strand, said first strand comprising a flanking sequence complementary to said target RNA and central sequence comprising at least one non-complementary nucleotide in a location opposite a defect of said target RNA, wherein said flanking sequence of said first strand comprises an RNase H-resistant modification 3' and 5' to said nucleotide, said first strand and said second strand being annealed; and  
hybridizing said complex to said target RNA, wherein a repaired RNA is produced, said RNA comprising a sequence alteration opposite said defect of said target RNA, wherein said genomic target DNA sequence is unaltered.
28. The method of claim 27, wherein said second strand is shorter than said first strand.
29. The method of claim 27, wherein said first strand and said second strand are of equal length.
30. The method of claim 27, further comprising contacting the target RNA with a phosphorothioate (PS) containing sequence of a deoxynucleotide with RNase H resistant flanking ends.
31. The method of claim 30, wherein following contacting the target RNA with a phosphorothioate (PS) containing sequence, treating the target RNA with annealed hybrid oligonucleotide complex, wherein a repaired RNA is produced.
32. The method of claim 27, wherein said alteration is not maintained in a progeny of said cell.
33. The method of claim 27, wherein said defect is a substitution, deletion, or addition of at least one base pair compared to a normal wild type sequence.
34. The method of claim 27, wherein said RNase H-resistant modification is the addition of a 2-O-methyl moiety.

35. The method of claim 27, wherein at least one nucleotide of said flanking sequence 3' to said oligonucleotide hybridizable to the target and at least one nucleotide of said flanking sequence 5' to said oligonucleotide hybridizable to the target comprise said RNase H-resistant modification.
36. The method of claim 27, wherein said first strand comprises an RNase activating oligonucleotide comprising a phosphorothioate linkage flanked by RNase H resistant segments.
37. The method of claim 27, wherein said first strand is at least 10 nucleotides in length.
38. The method of claim 27, wherein said first strand comprises at least 11 nucleotides.
39. The method of claim 27, wherein said flanking sequence of said first strand comprises at least two nucleotides.
40. The method of claim 27, wherein said second strand comprises at least 7 nucleotides.